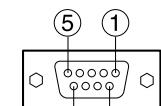# Panasonic Projectors RS-232C Control Specifications
PT-D10000/DW10000 PT-D7700/DW7000 PT-D5600/DW5000 PT-D5500 PT-D3500

The main unit is equipped with SERIAL terminals located in its terminal section on the side, and this terminal is compliant with RS-232C.
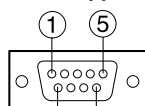
■ Pin assignments and signal names

D-Sub 9-pin (female), external appearance

Serial input terminal

Pin No.	Signal name	Description
①		NC
②	TXD	Send data
③	RXD	Receive data
④		Connected internally
⑤	GND	Ground
⑥		NC
⑦	CTS	Connected internally
⑧	RTS	
⑨		NC

D-Sub 9-pin (male), external appearance

Serial output terminal

Pin No.	Signal name	Description
①		NC
②	RXD	Receive data
③	TXD	Send data
④		NC
⑤	GND	Ground
⑥		NC
⑦	RTS	Connected internally
⑧	CTS	
⑨		NC

■ Communication conditions (Factory setting)

Signal level	RS-232C-compliant
Synchronization method	Start-stop synchronization
Baud rate	9 600bps
Parity	None
Character length	8 bits
Stop bit	1 bit
X parameter	None
S parameter	None

■ Basic format

Transmission from the computer begins with STX, then the ID, command, parameter, and ETX are sent in this order. Add parameters according to the details of control.

| STX | A D | I 1 | I 2 | ; | C1 | C2 | C3 | : | P1 | P2 | ～ | Pn | ETX |

Start

Two ID characters (2 bytes)
ZZ, 1 to 64 and 0A to 0Z
ID designate

Semicolon

3 command characters (3 bytes)

Colon

Parameter (undefined length)

End
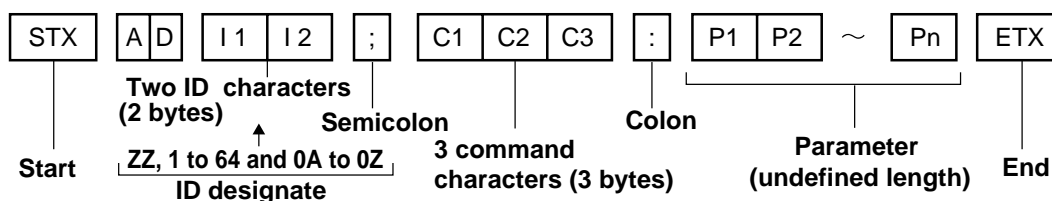
Attention
- No command can be sent or received for 10 to 60 seconds after the lamp starts lighting. Try sending any command after that period has elapsed.
- When sending several commands, be sure to wait for more than 0.5 seconds after receiving a response from the projector, and then send the next command.
  When sending commands without parameters, a colon (:) is not necessary.

Note
- If a wrong command is received, the projector will send an ER401 or ER402 command to the computer.
- Projector ID supported on the RS-232C interface is ZZ (ALL) and a group of 1 to 64 and 0A to 0Z.
- If a command is sent with a projector ID specified, the projector will return answer back only in the following cases:
  If it coincides with the projector ID,
  ID specification is ALL and VPS-SYSTEM is the master, or
  ID specification is group and Group is the master.

Control commands

Item	Command:Parameter	Function	Call Back	D10000/DW10000	D7700/DW7000	D5600/DW5000 D5500	D3500	Remarks
POWER	PON	POWER ON	PON	YES	YES	YES	YES	
	POF	STANDBY(POWER OFF)	POF	YES	YES	YES	YES	
FREEZE	OFZ:0	FREEZE OFF	OFZ:0	NO	YES	YES	YES	
	OFZ:1	FREEZE ON	OFZ:1	NO	YES	YES	YES	
AUTO SETUP	OAS	AUTO SETUP	OAS	YES	YES	YES	YES	
SHUTTER	OSH:0	SHUTTER OFF	OSH:0	YES	YES	YES	YES	
	OSH:1	SHUTTER ON	OSH:1	YES	YES	YES	YES	
INPUT SELECT	IIS:RG1	RGB-1	IIS:RG1	YES	YES	YES	YES	
	IIS:RG2	RGB-2	IIS:RG2	YES	YES	YES	YES	
	IIS:RG3	RGB-3	IIS:RG3	NO	NO	NO	NO	
	IIS:VID	VIDEO	IIS:VID	YES	YES	YES	YES	
	IIS:SVD	S-VIDEO	IIS:SVD	YES	YES	YES	YES	
	IIS:DVI	DVI	IIS:DVI	YES	NO	YES	YES	
	IIS:AUX	AUX	IIS:AUX	YES	YES	NO	NO	
	IIS:AUX,AW1	AUX LINE(Only MD95VM2)	IIS:AUX,AW1	NO	YES	NO	NO	
	IIS:AUX,AW2	AUX Y/C (Only MD95VM2)	IIS:AUX,AW2	NO	YES	NO	NO	
TEST	OTS:00	EXIT Test Pattern	OTS:00	YES	YES	YES	YES	
	OTS:01	WHITE	OTS:01	YES	YES	YES	YES	
	OTS:02	BLACK	OTS:02	YES	YES	YES	YES	
	OTS:03	CHECKER1	OTS:03	YES	YES	YES	YES	
	OTS:04	CHECKER2	OTS:04	YES	YES	NO	NO	
	OTS:05	1% WHITE WINDOW	OTS:05	YES	YES	YES	YES	
	OTS:06	1% BLACK WINDOW	OTS:06	YES	YES	YES	YES	
	OTS:07	CROSS HATCH	OTS:07	YES	YES	YES	YES	
	OTS:08	COLOR BAR	OTS:08	YES	YES	YES	YES	
	OTS:09	RAMP	OTS:09	NO	NO	YES	YES	
ON SCREEN	OOS:0	OSD OFF	OOS:0	YES	YES	YES	YES	
	OOS:1	OSD ON	OOS:1	YES	YES	YES	YES	
MUTE	AMT:0	AUDIO MUTE OFF	AMT:0	NO	NO	NO	YES	
	AMT:1	AUDIO MUTE ON	AMT:1	NO	NO	NO	YES	

Adjustment Mode

Item	Command:Parameter	Function	Call Back	D10000/DW10000	D7700/DW7000	D5600/DW5000 D5500	D3500	Remarks
PICTURE MODE	VPM:NAT	NATURAL	VPM:NAT	YES	YES	YES	YES	
	VPM:STD	STANDARD	VPM:STD	YES	YES	YES	YES	
	VPM:DYN	DYNAMI	VPM:DYN	YES	YES	YES	YES	
	VPM:CIN	CINEMA	VPM:CIN	YES	YES	YES	YES	
	VPM:GRA	GRAPHIC	VPM:GRA	YES	YES	YES	YES	
	VPM:USR	USER	VPM:USR	YES	NO	NO	NO	
COLOR	VCO:p1p2p3	COLOR Value Adjust	VCO:p1p2p3	YES	YES	YES	YES	From0 To 100 *1
TINT	VTN:p1p2p3	TINT Value Adjust	VTN:p1p2p3	YES	YES	YES	YES	From0 To 62 *3
COLOR TEMP.	OTE:0	LOW	OTE:0	YES	YES	NO	NO	
	OTE:1	MIDDLE	OTE:1	YES	YES	YES	YES	
	OTE:2	HIGH	OTE:2	YES	YES	YES	YES	
	OTE:3	DYNAMIC	OTE:3	NO	NO	NO	NO	
	OTE:4	USER (USER1)	OTE:4	YES	NO	YES	YES	
	OTE:5	STANDARD	OTE:5	NO	NO	NO	NO	
	OTE:6	NATURAL	OTE:6	NO	NO	NO	NO	
	OTE:7	CINEMA	OTE:7	NO	NO	NO	NO	
	OTE:8	GRAPHIC	OTE:8	NO	NO	NO	NO	
	OTE:9	USER2	OTE:9	YES	YES	NO	NO	
	OTE:10	DEFAULT	OTE:10	YES	YES	YES	YES	
CONTRAST	VCN:p1p2p3	CONTARST Value Adjust	VCN:p1p2p3	YES	YES	YES	YES	From0 To 63 *1
BRIGHTNESS	VBR:p1p2p3	BRIGHTNESS Value Adjust	VBR:p1p2p3	YES	YES	YES	YES	From0 To 63 *1
SHARPNESS	VSR:p1p2p3	SHARPNESS Value Adjust	VSR:p1p2p3	YES	YES	YES	YES	<SD> From0 To 15, <HD,RGB>From0 To 7 *1
SET DATE	TSD:y1y2y3y4m1m2d1d2w	Set Date	TSD:y1y2y3y4m1m2d1d2w	YES	YES	YES	YES	y1y2y3y4m1m2d1d2+Date of Week Mon=1,Tue=2,···,Sun=7 *2
SET TIME	TST:h1h2m1m2s1s2	Set Time	TST:h1h2m1m2s1s2	YES	YES	YES	YES	*2
VOLUME	AVL:p1p2p3	AUDIO VOLUME	AVL:p1p2p3	NO	NO	NO	YES	
				NO	NO	NO	YES	

*1: Regarding p1p2p3, +1,+01,+001,1,01,001 are All Accepted   *2: Date/Time Should be set on UTC (Coordinate Universal Time)   *3: Only use of PT-D10000 and PT-DW10000
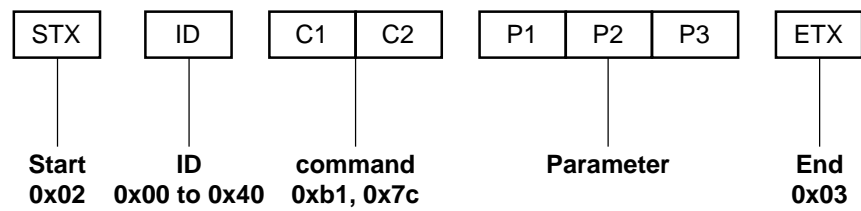
Status Asking Comman

Item	Command:Parameter	Function	Call Back	D10000/DW10000	D7700/DW7000	D5600/DW5000 D5500	D3500	Meaning	Remarks
POWER CONDITION	QPW	Main Power Status	000	YES	YES	YES	YES	STANDBY(OFF)	
			001	YES	YES	YES	YES	ON	
FREEZE	QFZ	Freeze Function Status	0	NO	YES	YES	YES	OFF	
			1	NO	YES	YES	YES	ON	
SHUTTER	QSH	Shutter Status	0	YES	YES	YES	YES	OFF	
			1	YES	YES	YES	YES	ON	
INPUT SIGNAL	QIN	Input Signal Status	RG1	YES	YES	YES	YES	RGB1	
			RG2	YES	YES	YES	YES	RGB2	
			RG3	NO	NO	NO	NO	RGB3	
			VID	YES	YES	YES	YES	VIDEO	
			SVD	YES	YES	YES	YES	S-VIDEO	
			DVI	YES	NO	YES	YES	DVI	
			AUX	YES	YES	NO	NO	AUX	
	QIN:AW		AUX,AW1	NO	YES	NO	NO	AUX LINE	MD95VM2
	QIN:AW		AUX,AW2	NO	YES	NO	NO	AUX Y/C	MD95VM2
TEST	QTS	Test Pattern Status	00	YES	YES	YES	YES	EXIT Test Pattern	
			01	YES	YES	YES	YES	WHITE	
			02	YES	YES	YES	YES	BLACK	
			03	YES	YES	YES	YES	CHECKER1	
			04	YES	YES	NO	NO	CHECKER2	
			05	YES	YES	YES	YES	1% WHITE WINDOW	
			06	YES	YES	YES	YES	1% BLACK WINDOW	
			07	NO	YES	YES	YES	CROSS HATCH	
			08	YES	YES	YES	YES	COLOR BAR	
			09	NO	NO	YES	YES	RAMP	
ON SCREEN	QOS	ON SCREEN Status	0	YES	YES	YES	YES	off	
			1	YES	YES	YES	YES	on	
PICTURE MODE	QPM	PICTURE MODE Status	NAT	YES	YES	YES	YES	NATURAL	
			STD	YES	YES	YES	YES	STANDARD	
			DYN	YES	YES	YES	YES	DYNAMIC	
			CIN	YES	YES	YES	YES	CINEMA	
			GRA	YES	YES	YES	YES	GRAPHIC	
			USR	YES	NO	NO	NO	USER	
COLOR	QVC	COLOR Adjust Value Check	p1p2p3	YES	YES	YES	YES		
TINT	QVT	TINT Adjust Value Check	p1p2p3	YES	YES	YES	YES		
COLOR TEMP.	QTE	COLOR TEMP Status Check	0	YES	YES	NO	NO	LOW	
			1	YES	YES	YES	YES	MIDDLE	
			2	YES	YES	YES	YES	HIGH	
			3	NO	NO	NO	NO	DYNAMIC	
			4	YES	YES	YES	YES	USER (USER1)	
			5	NO	NO	NO	NO	STANDARD	
			6	NO	NO	NO	NO	NATURAL	
			7	NO	NO	NO	NO	CINEMA	
			8	NO	NO	NO	NO	NATURAL	
			9	YES	YES	NO	NO	USER2	
			10	YES	YES	YES	YES	DEFAULT	
CONTRAST	QVR	CONTARST Adjust Value Checking	p1p2p3	YES	YES	YES	YES		
BRIGHTNESS	QVB	BRIGHTNES Adjust Value	p1p2p3	YES	YES	YES	YES		
SHARPNESS	QVS	SHARPNESS Adjust Value	p1p2p3	YES	YES	YES	YES		
SET RUNTIME	QST	Set Run Time CHeck	p1p2p3p4p5	YES	YES	YES	YES	00000h~99999h	
LAMP ON TIME	Q$L:1	LAMP1 Run Time Check	p1p2p3p4	YES	YES	YES	YES	0000h~9999h	
	Q$L:2	LAMP2 Run Time Check	p1p2p3p4	YES	YES	YES	NO		
	Q$L:3	LAMP3 Run Time Check	p1p2p3p4	YES	NO	NO	NO		
	Q$L:4	LAMP4 Run Time Check	p1p2p3p4	YES	NO	NO	NO		
LAMP SELECT	QSL	Lamp Operation Mode Check	0		YES	YES	NO	DUAL	
			1		YES	YES	NO	SINGLE	
			2		YES	YES	NO	LAMP1	
			3		YES	YES	NO	LAMP2	

LAMP SELECT (D10000/DW10000)	QSL	Lamp Operation Mode Check	0	YES	NO	NO	NO	QUAD (4 lamp)	
			1	YES	NO	NO	NO	L1/L4	
			2	YES	NO	NO	NO	L2/L3	
			3	YES	NO	NO	NO	DUAL (2 lamp)	
			4	YES	NO	NO	NO	L1/L2/L3	
			5	YES	NO	NO	NO	L1/L2/L4	
			6	YES	NO	NO	NO	L1/L3/L4	
			7	YES	NO	NO	NO	L2/L3/L4	
			8	YES	NO	NO	NO	TRIPLE (3 lamp)	
			9	YES	NO	NO	NO	L1	
			10	YES	NO	NO	NO	L2	
			11	YES	NO	NO	NO	L3	
			12	YES	NO	NO	NO	L4	
			13	YES	NO	NO	NO	SINGLE	
LAMP POWER	QLP	LAMP POWER Mode Check	0	NO	YES	YES	YES	HIGH	
			1	NO	YES	YES	YES	LOW	
			2	NO	TBD	YES	YES	(RESERVED)	
VPS SYSTEM	QVY	VPS SYSTEM Check	0	YES	YES	YES	NO	SLAVE	
			1	YES	YES	YES	NO	MASTER	
INPUT BOARD	QIB	Check the type of Input Board	p1p2p3p············· (Voluntary length)	NO	YES	NO	NO	MD95VM2	
				YES	YES	NO	NO	MD95SD1	
				NO	YES	NO	NO	MD95SD2	
				YES	YES	NO	NO	MD95SD3	
				NO	YES	NO	NO	MD95RGB	
				NO	YES	NO	NO	MD75NT	
				YES	YES	NO	NO	MD75DV	
				YES	YES	NO	NO	MD77SD1	
				YES	YES	NO	NO	MD77SD3	
				YES	YES	NO	NO	MD77DV	
				YES	YES	NO	NO	NONE	No board
				YES	YES	NO	NO	UNKNOWN	Unknown board
				YES	YES	NO	NO	NOT SUPPORT	Unsupported board
TEMP CHECK	QTM:0	Check the status of Temperature Sensor	p1p2p3p4/p5p6p7p8 (Celsius/ Fahrenheit)	YES	YES	YES	YES	INPUT AIR	
	QTM:1			YES	YES	NO	NO	OUTPUT AIR	
	QTM:2			YES	YES	YES	YES	OPTICAL MODULE	
GET DATE	QGD	Check the Day	y1y2y3y4m1m2d1d2w	YES	YES	YES	YES	Yyyymmdd (day of the week)	Mon=1,Tur=2,~Sun=7
GET TIME	QGT	Check the Time	h1h2m1m2s1s2	YES	YES	YES	YES	hhmmss	UTC
MUTE	QAM	Audio Mute Status	0	NO	NO	NO	YES	MUTE OFF	
			1	NO	NO	NO	YES	MUTE ON	
VOLUME	QAV	Volume Status	p1p2p3	NO	NO	NO	YES		

■ Extended format for lens

Transmission from the computer begins with STX, then the ID, command, parameter, and ETX are sent in this order.

| STX | ID | C1 | C2 | P1 | P2 | P3 | ETX |

Start
0x02

ID
0x00 to 0x40

command
0xb1, 0x7c

Parameter

End
0x03

*Lens commands are binary 8byte command. PT-D7600/D7500 ware supported version 2.07

ID: D ALL=0x00, ID1=0x01, ID2=0x02, ID3=0x03, ID4=0x04,... ,ID63=0x3f, ID64=0x40 Projector default setting is ID ALL.
C1 C2: 0xb1 0x7c

P1	P2	P3	Function	D10000/DW10000	D7700/DW7000	D5600/DW5000/D5500	D3500
0x00	0x00	0x00	HORIZONTAL SHIFT RIGHT SLOW	YES	YES	NO	NO
0x00	0x01	0x00	HORIZONTAL SHIFT RIGHT NORMAL	YES	YES	NO	NO
0x00	0x02	0x00	HORIZONTAL SHIFT RIGHT FAST	YES	YES	NO	NO
0x00	0x00	0x01	HORIZONTAL SHIFT LEFT SLOW	YES	YES	NO	NO
0x00	0x01	0x01	HORIZONTAL SHIFT LEFT NORMAL	YES	YES	NO	NO
0x00	0x02	0x01	HORIZONTAL SHIFT LEFT FAST	YES	YES	NO	NO
0x01	0x00	0x00	VERTICAL SHIFT UP SLOW	YES	YES	YES	YES
0x01	0x01	0x00	VERTICAL SHIFT UP NORMAL	YES	YES	YES	YES
0x01	0x02	0x00	VERTICAL SHIFT UP FAST	YES	YES	YES	YES
0x01	0x00	0x01	VERTICAL SHIFT DOWN SLOW	YES	YES	YES	YES
0x01	0x01	0x01	VERTICAL SHIFT DOWN NORMAL	YES	YES	YES	YES
0x01	0x02	0x01	VERTICAL SHIFT DOWN FAST	YES	YES	YES	YES
0x02	0x00	0x00	FOCUS +(SHORT) SLOW	YES	YES	YES	YES
0x02	0x01	0x00	FOCUS +(SHORT) NORMAL	YES	YES	YES	YES
0x02	0x02	0x00	FOCUS +(SHORT) FAST	YES	YES	YES	YES
0x02	0x00	0x01	FOCUS -(LONG) SLOW	YES	YES	YES	YES
0x02	0x01	0x01	FOCUS -(LONG) NORM	YES	YES	YES	YES
0x02	0x02	0x01	FOCUS -(LONG) FAS	YES	YES	YES	YES
0x03	0x00	0x00	ZOOM + SLOW	YES	YES	YES	YES
0x03	0x01	0x00	ZOOM + NORMAL	YES	YES	YES	YES
0x03	0x02	0x00	ZOOM + FAST	YES	YES	YES	YES
0x03	0x00	0x01	ZOOM - SLOW	YES	YES	YES	YES
0x03	0x01	0x01	ZOOM - NORMAL	YES	YES	YES	YES
0x03	0x02	0x01	ZOOM - FAST	YES	YES	YES	YES
0x00	0x80	0x01	HORIZONTAL SHIFT HOME POSITION START	YES	NO	NO	NO
0x00	0x80	0x00	HORIZONTAL SHIFT HOME POSITION STOP	YES	NO	NO	NO

For example

1. LENS ZOOM + NORMAL for ID ALL

   Send 8 byte command   0x02 0x00 0xb1 0x7c 0x03 0x01 0x00 0x03
   Receive 8 byte message from projector 0x02 0x00 0xb3 0x7c 0x03 0x01 0x00 0x03

2. VERTICAL SHIFT DOWN FAST for ID ALL

   Send 8 byte command   0x02 0x00 0xb1 0x7c 0x01 0x02 0x01 0x03
   Receive 8 byte message from projector 0x02 0x00 0xb3 0x7c 0x01 0x02 0x01 0x03

■ Cable specifications

<Connecting to a PC>

	Projector			Computer (DTE specifications)
1	NC		NC	1
2				2
3				3
4	NC		NC	4
5				5
6	NC		NC	6
7				7
8				8
9	NC		NC	9

Attention • To connect the computer to the SERIAL terminal, prepare an adequate communication cable that fits to your personal computer.

■ Transmission from the computer
(Used Only for PT-D7700/DW7000, PT-D5600/DW5000 and PT-D3500)

Transmission from the computer begins with STX, then the ID, command, and ETX are sent in this order.

STX	ID	C1	ETX
Start **0x02**	**ID** **0x00 ~ 0x40**	**Command** **0xfe**	**End** **0x03**
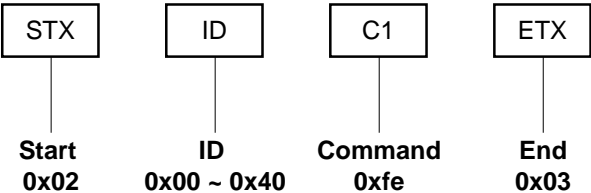
Self-diagnosis result read commands is binary 4 byte command.

ID: ID ALL=0x00, ID1=0x01, ID2=0x02, ID3=0x03, ID4=0x04, ... ,ID63=0x3f, ID64=0x40
Projector default setting is ID ALL.

■ Responses from the projector

STX	ID	C1	P1	P2	P3	P4	P5	P6	P7	P8	ETX
Start **0x02**	**ID** **0x00 ~ 0x40**	**Command** **0xfe**	bit31				Self-diagnosis information **4 bytes** **(32bits)**	bit0			**End** **0x03**
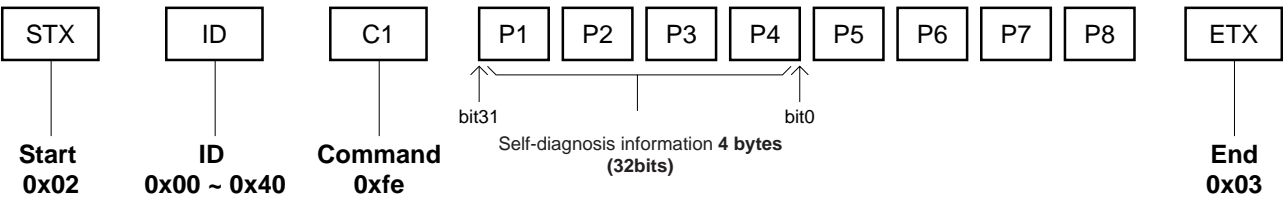
Responses are binary 12 byte command.
Self-diagnosis results are 4 byte (32bit) command.
P5-P8, all 4 bytes are extended bits and the values are undefined.

Bit allocation for Self-diagnosis information

Bit	Title	Description	Condition to clear bit	D7700/DW7000	D5600/DW5000	D5500	D3500
bit31	MAIN CPU BUS ERROR	Trouble has occurred in the microcomputer circuitry. If it does not recover after turning power back on, consult your dealer.	Power on	YES	YES	YES	YES
bit30	FAN ERROR	Trouble has occurred in the fan or its drive circuit. If it does not recover after turning power back on, consult your dealer.	Power on	YES	YES	YES	YES
bit29	OPTICS MODULE TEMPERATURE ERROR	The temperature inside the projector is high and the projector has shut down. • Check if the ventilation port is blocked.	Power on	YES	YES	YES	YES
bit28	INPUT AIR TEMPERATURE ERROR	• Is the room air temperature too high? • Check the air filter for clogging.	Power on	YES	YES	YES	YES
bit27	OUTPUT AIR OR LAMP AMBIENT TEMPERATURE ERROR		Power on	YES	YES	YES	YES
bit26	EXTENSION	Undefined value	-	NO	NO	NO	NO
bit25	LAMP2 REMAIN TIME ERROR (Shutdown)	The lamp runtime has exceeded the prescribed cumulative time, and it is now time to replace the lamp.	LAMP 2 reset	YES	YES	YES	NO
bit24	LAMP1 REMAIN TIME ERROR (Shutdown)		LAMP 1 reset	YES	YES	YES	YES
bit23	LAMP2 FAILED TO LIGHT	The lamp has failed to light.	LAMP 2 illuminates	YES	YES	YES	NO
bit22	LAMP1 FAILED TO LIGHT	Did you turn the power back on immediately after turning it off?	LAMP 1 illuminates	YES	YES	YES	YES
bit21	APERTURE (CONTRAST- SHUTTER) ERROR	Trouble has occurred in the aperture. If it does not recover after turning power back on, consult your dealer.	Power on or normal operation of the aperture	YES	NO	NO	NO
bit20	SHUTTER ERROR	Trouble has occurred in the shutter circuitry. If it does not recover after turning power back on, consult your dealer.	Power on	YES or normal operation of the shutter	NO	NO	YES
bit19	OPTICS MODULE TEMP. SENSOR ERROR	Trouble has occurred in the temperature detection sensor inside the projector. Consult your dealer.	Main power on	YES	YES	YES	YES
bit18	INPUT AIR TEMP. SENSOR ERROR	Trouble has occurred in the sensor used to detect the input air temperature. Consult your dealer.	Main power on	YES	YES	YES	YES
bit17	OUTPUT AIR OR LAMP AMBIENT TEMPERATURE ERROR	Trouble has occurred in the sensor used to detect the output air temperature or lamp ambient temperature. Consult your dealer.	Main power on	YES	NO	NO	YES
bit16	CLOCK BATTELY WARNING	The battery has been run out. consult your dealer.	The battery has been changed.	NO	YES	YES	YES
bit15	OPTICS MODULE SENSOR LOW TEMP. WARNING	It may be that the projector is being used where the ambient temperature is low (approx. 0). If the temperature in the projector does not go up within 5 min., the projector will shut down.	• Higher temperature than the warning level during power on • Power on	YES	YES	YES	YES
bit14	OPTICS MODULE SENSOR HIGH TEMP. WARNING	The temperature inside the projector is high. If the temperature goes up, the projector will shut down.	• Higher temperature than the warning level during power on • Power on	YES	YES	YES	YES
bit13	INPUT AIR HIGH TEMP. WARNING	• Check if the ventilation port is blocked. • Is the room air temperature too high?		YES	YES	YES	YES
bit12	OUTPUT AIR OR LAMP AMBIENT HIGH TEMP. WARNING	• Check the air filter for clogging. Undefined value		YES	YES	YES	YES
bit11	TEST	Undefined value	Main power on	YES	YES	YES	YES
bit10	AIR FILTER	Too much dust accumulates on the air filter. Turn off the MAIN POWER switch and clean the air filter.	Main power on	NO	YES	NO	NO
bit09	EXTENSION	Undefined value	-	NO	NO	NO	NO
bit08	EXTENSION	Undefined value	-	NO	NO	NO	NO
bit07	LAMP2 REMAIN TIME WARNING	It is time to replace the lamp. Prepare the new lamp. The projector will shut down within 200 hours.	LAMP 2 reset	YES	YES	YES	NO
bit06	LAMP1 REMAIN TIME WARNING		LAMP 1 reset	YES	YES	YES	YES
bit05	EXTENSION	Undefined value	-	NO	NO	NO	NO
bit04	EXTENSION	Undefined value	-	NO	NO	NO	NO
bit03	AIRFLOW SENSOR	Trouble has occurred in the air volume sensor. Consult your dealer.	Main power on	NO	YES	NO	NO
bit02	COLOR WHEEL ERROR	Trouble has occurred in the color wheel or its drive circuit. If it does not recover after turning power back on, consult your dealer.	Power on	NO	YES	YES	YES
bit01	EXTENSION	Undefined value	-	NO	NO	NO	NO
bit00	EXTENSION	Undefined value	-	NO	NO	NO	NO

*The value of NO is undefined.

■ Example

-When the transmission ID from PC is ID ALL and the projector ID is ALL,

      Send (the data sent from the computer)

          0x02 0x00 0xfe 0x03

      Receive (the data received by the computer)

          0x02 0x00 0xfe 0x10 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x03

      Self-diagnosis information is x10000000, or bit 28 is one so that it is Input temp. error.

- When the transmission ID from PC is ID ALL and the projector ID is 2

      Send (the data sent from the computer)

          0x02 0x00 0xfe 0x03

      Receive (the data received by the computer)

          0x02 0x02 0xfe 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x03

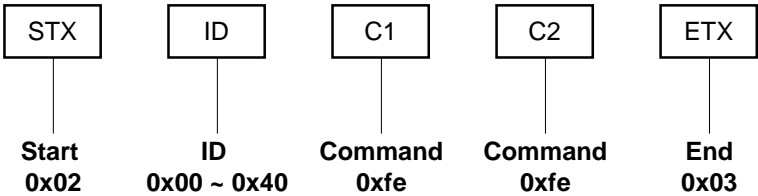   Self-diagnosis information is 0x00000000 and it is normal.

Note •Values of extension bits are undefined. It is normal even if self-diagnosis information is 0x00000001.

■ Transmission from the computer

(Used Only for PT-D10000/DW10000)

Transmission from the computer begins with STX, then the ID, command, and ETX are sent in this order.

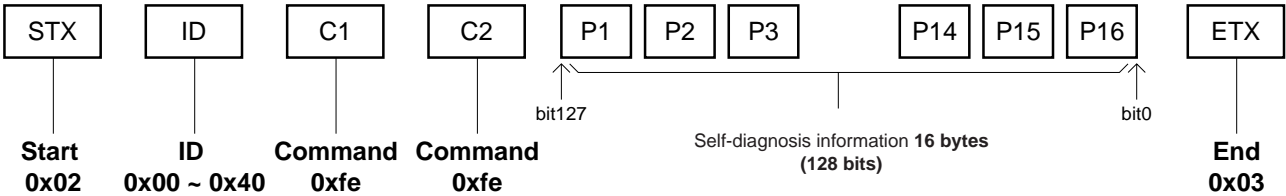| STX	ID	C1	C2	ETX
Start **0x02**	**ID** **0x00 ~ 0x40**	**Command** **0xfe**	**Command** **0xfe**	**End** **0x03**

When self-diagnosis result operation in the PT-D10000/DW10000, read commands of C1 and C2 command is necessary.
A command is binary 4 byte command.

ID: ID ALL=0x00, ID1=0x01, ID2=0x02, ID3=0x03, ID4=0x04, ... ,ID63=0x3f, ID64=0x40
      Projector default setting is ID ALL.

■ Responses from the projector

(Used Only for PT-D10000/DW10000)

STX	ID	C1	C2	P1	P2	P3	P14	P15	P16	ETX

bit127   bit0

Start **0x02**   **ID** **0x00 ~ 0x40**   **Command** **0xfe**   **Command** **0xfe**   Self-diagnosis information **16 bytes** **(128 bits)**   **End** **0x03**

Responses are binary 21 byte command.
Self-diagnosis results are 16 byte (128bit) command.

Parameters (*2 to *17)

Bit	Title	Description	Condition to clear bit
127	—		
126	—		
125	—		
124	—		
123	—		
122	—		
121	FM COMMUNICATION ERROR	Error in communication with FM.	Main power on
120	FPGA2 SETTING ERROR		
119	FPGA1 SETTING ERROR		
118	FM-B TEST FAIL		Power on
117	FM-G TEST FAIL		
116	FM-R TEST FAIL		
115	BOARD A NOT INITIALIZED		Board A initialized
114	IIC COMMUNICATION RETRY 17		
113	IIC COMMUNICATION RETRY 16		
112	IIC COMMUNICATION RETRY 15		
111	IIC COMMUNICATION RETRY 14		
110	IIC COMMUNICATION RETRY 13		
109	IIC COMMUNICATION RETRY 12		
108	IIC COMMUNICATION RETRY 11		
107	IIC COMMUNICATION RETRY 10		
106	IIC COMMUNICATION RETRY 9		
105	IIC COMMUNICATION RETRY 8		
104	IIC COMMUNICATION RETRY 7		
103	IIC COMMUNICATION RETRY 6		
102	IIC COMMUNICATION RETRY 5		
101	IIC COMMUNICATION RETRY 4		
100	IIC COMMUNICATION RETRY 3		
99	IIC COMMUNICATION RETRY 2		
98	IIC COMMUNICATION RETRY 1		
97	NETWORK MICROCOMPUTER COMMUNICATION ERROR		Main power on
96	RESIZE SETTING ERROR		Main power on
86	LENS SHIFT ERROR		Main power on
85	FPGA EXPANSION ERROR		Main power on
84	RAM ERROR		
83	FLASH ROM ERROR		
82	FPGA2 FULL-HD CONFIG. ERROR		Power on
81	FPGA2 SXGA+ CONFIG. ERROR		
80	FPGA1 CONFIG. ERROR		
79	LAMP 4 PFC ERROR		Power on
78	LAMP 3 PFC ERROR		
77	LAMP 2 PFC ERROR		
76	LAMP 1 PFC ERROR		
75	LAMP 4 NOT INITIALIZED	The lamp's EEPROM was not initialized.	Lamp EEPROM initialized
74	LAMP 3 NOT INITIALIZED		
73	LAMP 2 NOT INITIALIZED		
72	LAMP 1 NOT INITIALIZED		
71	DC 5.0 V ERROR		
70	DC 3.3 V ERROR		
69	DC 2.5 V ERROR		
68	CLEANER MECHANISM ERRO	The cleaning process timed out	Cleaning performed
67	APERTURE ERROR		
66	SHUTTER ERROR	A shutter error has occurred.	Shutter on/off
65	FAN ERROR 18	BALLAST2 FAN	Normal fan operation
64	FAN ERROR 17	BALLAST2 FAN	
63	FAN ERROR 16	L-PROSM FAN	
62	FAN ERROR 15	R-PROSM FAN	
61	FAN ERROR 14	B-LIQUID COOLING	
60	FAN ERROR 13	G-LIQUID COOLING	
59	FAN ERROR 12	R-DMD FAN	
58	FAN ERROR 11	EXAUST FAN R	
57	FAN ERROR 10	EXAUST FAN L	
56	FAN ERROR 9	EXAUST FAN C	
55	FAN ERROR 8	RADIATOR FAN	
54	FAN ERROR 7	BALLAST3 FAN	
53	FAN ERROR 6	BALLAST1 FAN	

52	FAN ERROR 5	LAMP4 FAN	Normal fan operation
51	FAN ERROR 4	LAMP3 FAN	
50	FAN ERROR 3	LAMP2 FAN	
49	FAN ERROR 2	LAMP1 FAN	
48	FAN ERROR 1	P-UNIT FAN	
47	—		
46	—		
45	—		
44	—		
43	—		
42	—		
41	—		
40	—		
39	—		
38	—		
37	CHANGE INTERNAL CLOCK BATTERY	Date/time is invalid (before Jan. 1, 2006 or Jan. 1, 2036 or later).	Date/time reset (after battery change)
36	FILTER CLOGGED ERROR		
35	AIR VOLUME SENSOR NOT FOUND	The air volume sensor is not found.	Main power on
34	OUTPUT AIR SENSOR NOT FOUND	The output air sensor is not found.	
33	DMD SENSOR NOT FOUND	The DMD sensor is not found.	
32	INPUT AIR SENSOR NOT FOUND	The input air sensor is not found.	
29	LAMP COVER NOT CLOSED	The lamp cover is not closed (for more than 1 second continuously).	Lamp cover closed, then main power on
28	AC VOLTAGE DROP WARNING (BELOW 90 V)		
27	LAMP 4 NOT MOUNTED	The lamp is not mounted.	Lamp mounted, then main power on
26	LAMP 3 NOT MOUNTED		
25	LAMP 2 NOT MOUNTED		
24	LAMP 1 NOT MOUNTED		
23	LAMP 4 IGNITIONFAILURE	The lamp fails to ignite.	Lamp illumination processing performed
22	LAMP 3 IGNITIONFAILURE		
21	LAMP 2 IGNITIONFAILURE		
20	LAMP 1 IGNITIONFAILURE		
19	LAMP 4 ILLUMINATION FAILURE	The lamp fails to illuminate.	
18	LAMP 3 ILLUMINATION FAILURE		
17	LAMP 2 ILLUMINATION FAILURE		
16	LAMP 1 ILLUMINATION FAILURE		
15	LAMP 4 USAGE TIME ELAPSED	The lamp usage time exceeds the stipulated value	Lamp replaced
14	LAMP 3 USAGE TIME ELAPSED		
13	LAMP 2 USAGE TIME ELAPSED		
12	LAMP 1 USAGE TIME ELAPSED		
11	LAMP 4 USAGE TIME WARNING	The lamp usage time exceeds the stipulated value.	
10	LAMP 3 USAGE TIME WARNING		
9	LAMP 2 USAGE TIME WARNING		
8	LAMP 1 USAGE TIME WARNING		
7	DMD LOW TEMP. ERROR	The DMD ambient temperature is lower than the stipulated value.	DMD ambient temperature at or above stipulated value
6	OUTPUT AIR TEMP. ERROR	The output air temperature exceeds the stipulated value.	Output air temperature below stipulated value
5	DMD TEMP. ERROR	The DMD ambient temperature exceeds the stipulated value.	DMD ambient temperature below stipulated value
4	INPUT AIR ERROR	The input air temperature exceeds the stipulated value.	Input air temperature below stipulated value
3	DMD LOW TEMP. WARNING	The DMD ambient temperature is lower than the stipulated value.	DMD ambient temperature at or above stipulated value
2	OUTPUT AIR TEMP. WARNING	The output air temperature exceeds the stipulated value.	Output air temperature below stipulated value
1	DMD TEMP. WARNING	The DMD ambient temperature exceeds the stipulated value.	DMD ambient temperature below stipulated value
0	INPUT AIR TEMP. WARNING	The input air temperature exceeds the stipulated value.	Input air temperature below stipulated value

Note

* Make sure to specify option FEh for this unit.

■ Example

-When the transmission ID from PC is ID ALL and the projector ID is ALL,

    Send (the data sent from the computer)

        0x02 0x00 0xfe 0xfe 0x03

    Receive (the data received by the computer)

        0x02 0x00 0xfe 0xfe 0x02 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x03

    Self-diagnosis information is 0x0200000000000000, or bit 121 is one so that it is FM communication error.

- When the transmission ID from PC is ID ALL and the projector ID is 2

    Send (the data sent from the computer)

        0x02 0x00 0xfe 0xfe 0x03

    Receive (the data received by the computer)

        0x02 0x02 0xfe 0xfe 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x03

    Self-diagnosis information is 0x0000000000000000 and it is normal.